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Hardwood Module
for the
Timberland Planning Component

California Department of Fish and Game
Northern California - North Coast Region
Interior Timberland Planning Team

Leadperson

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Resource Issue

Within the Northern California - North Coast Region (NC-NCR), hardwoods occur at elevations between 300 and 4,200 feet and are generally contained within three major habitat types; riparian forest, blue-oak woodland, and mixed evergreen forest (Barbour 1986). Hardwood forests rank among the most important habitat types within the NC-NCR**.** Of the six broad vegetation types, hardwoods rank third in numbers of wildlife species that depend solely on that type of habitat for reproduction (Ohmann and Mayer 1987). Hardwoods provide mast for wildlife forage and woody debris for terrestrial wildlife habitat. Additionally, they contribute to the development of multistoried canopy layers, nesting cavities, vegetation diversity and lateral growth branches that provide cover for escape, foraging, and reproduction. More than 300 species of vertebrates (birds, amphibians, reptiles, and mammals) are known to utilize oak woodlands (Giusti and Tinnin 1993).

Hardwoods also contribute to the structure of riparian and aquatic systems. Root wads from alders, aspen, cottonwoods, and maples provide bank stabilization as well as in stream cover for juvenile salmonids and other native fish. The stems and branches of hardwoods contribute shade, nutrients, basking sites, and large woody debris. Many low-trophic organisms important for native fish and herpetofauna reproduce and live on the canopy, bark, and cavities of hardwoods.

Private timberland management practices generally focus on production of conifers and select against hardwoods. Even-aged prescriptions and regeneration silviculture such as clearcuts result in the general decline of hardwood stands due to site preparation for conifer regeneration. Site preparation typically involves mechanical and chemical treatments that eliminate or reduce hardwood distribution. Rehabilitation prescriptions often convert mixed hardwood/conifer and mixed hardwood/chaparral habitat types into conifer plantations. Additionally, many hardwoods, both down and standing, may be harvested as firewood.

Hardwoods on privately owned timberlands have received recent consideration by timber companies and natural resource agencies such as the Department of Fish and Game (DFG) and the Department of Forestry and Fire Protection (Joint Policy 1994). Although private and public entities are interested in providing hardwood values for terrestrial and aquatic systems, issues arise when an effort is made to combine timber company objectives with resource conservation. Because of this, the Interior Timberland Planning Team (Team) and timber companies should incorporate a collaborative programmatic approach for hardwood management strategies on the landscape.

Goal

- Maintain and recruit diverse hardwood elements for fish and wildlife on timber company lands

Objectives

- Collaborate with timber companies to collect hardwood data to create a baseline inventory of hardwood resources
- Develop collaborative programmatic strategies that maintain hardwood distribution and diversity on timber company lands

Strategic Plan

The Team will make staff time available to assist timber companies with hardwood planning. It is anticipated that conservation strategies may be unique to each timber company, requiring Team to work with companies on an individual basis. One method may be the development of a company hardwood management plan. This plan could include a set of goals, objectives, and strategies targeted for providing hardwood values for fish and wildlife on different scales identified on the landscape, while maintaining timber production goals. Team review of hardwood issues will be prioritized based on geographic location, landowner initiative, landowner size, resources at risk, and work loads.

The Team could provide recommendations to timber companies and their staff biologists that have started to develop hardwood management plans. When one company has developed strategies for hardwood conservation planning, it will be encouraged to create, maintain, and update its hardwood inventory data. The Team may suggest specific types of data be collected for analyses. This is expected to be a dynamic task that could change from the planning watershed level to a broader or narrower scale, based on resource priorities.

The process of collecting data and developing mutually agreed upon strategies for retaining hardwoods should lead to the creation of a planning document. The company could integrate a hardwood management plan into other planning documents, or create a separate programmatic hardwood planning document. The programmatic hardwood

planning document could be addressed and referred to during timber harvesting plan (THP) preparation. The result of this process would streamline and expedite THP review since hardwood conservation issues would take less time to evaluate.

Monitoring

The Team and individual timber companies will work together to create and update a hardwood inventory baseline that includes composition, density, and distribution of hardwoods throughout their ownership. The Team could collect data on active- and post-harvest inspections of THPs to verify that hardwood conservation policies are being implemented. Effectiveness monitoring would be achieved by collecting biological data over time. This monitoring would take time to develop and would be useful for adaptive management principles.

Adaptive Management

The progressive approach to resource planning includes adaptive management principles. Cooperative data collection and information sharing will be used to update the hardwood and may be used to modify hardwood conservation strategies/plans. Managing for hardwoods means there will need to be flexibility in integrating hardwood conservation strategies into other timberland planning documents when opportunities exist.

Measures of Success

Success will be measured by the extent to which the following are met:

- Timber companies are engaged in a cooperative efforts to integrate hardwood conservation strategies or is developing a programmatic hardwood planning document
- Timber companies are continually collecting hardwood related data
- Timber companies are implementing adaptive management principles

References

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